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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,224	03/23/2004	Marc R. Cossement	25384A	3310

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EXAMINER

RUDDOCK, ULA CORINNA

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/807,224

Applicant(s)

COSSEMENT ET AL.

Examiner

Ula C. Ruddock

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 24 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7 and 21-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 21-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All. b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Examiner has carefully considered Applicant's amendment and accompanying remarks filed August 24, 2006. The rejections have been maintained.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. Claims 1-5, 21, 23, 24, 26, 27, and 28 rejected under 35 U.S.C. 102(e) as being anticipated by Rodrigues et al. (US 2004/0254285). Rodrigues et al. disclose a fiberglass nonwoven binder (abstract). The binder comprises a carboxylic acid monomer such as acrylic acid, methacrylic acid, crotonic acid, and isocrotonic acid [0019], which the Examiner is equating to Applicant's polycarboxy polymer. Rodrigues et al. also disclose that is well known to use a crosslinking agent, such as triethanolamine, in binder systems [0008]. The binder further comprises compounds that are capable of forming hydrogen-bonding complexes with the carboxyl polymer which allows for crosslinking at lower temperatures [0034], such as polysaccharides, specifically, maltodextrins [0038]. The hydrogen-bonding complex to polymer binder weight ratio is from about 1:99 to about 99:1, which meets Applicant's requirement that the co-binder is present in an amount of at least 50% and the co-binder is present in an amount of at least about 75%. The binder further comprises a catalyst in an amount of 0-25% by weight [0041]. The catalysts can comprise alkali metal salts of a phosphorus-containing organic acid or fluoroborates [0041].

Regarding Applicant's newly added amendment, Rodrigues et al. specifically disclose a ratio of 1:99 to about 99:1, which meets Applicant's limitation of 90:10 to about 25:75 pre-binder to co-binder ratio.

Rejection is maintained.

Claim Rejections - 35 USC § 103

4. Claims 7 and 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Rodrigues et al. (US 2004/0254285), as shown above. Rodrigues et al. disclose the claimed invention except for the specific teaching that the dextrin is borax modified and that a molar ratio of the carboxylic acid groups to said hydroxyl groups is from 1:3 to 5:1.

It would have been obvious to one having ordinary skill at the time the invention was made to have modified the dextrin of Rodrigues et al. with borax, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. In the present invention, one would have used borax-modified dextrin motivated by the desire to increase the fire resistance of the binder composition.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the molar ratio of the carboxylic acid groups to said hydroxyl groups be from 1:3 to 5:1, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. In the present invention, one would have optimized the molar

ratio of the carboxylic acid groups to the hydroxyl groups motivated by the desire to lower the curing temperature.

Rejection is maintained.

5. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rodrigues et al. (US 2004/0254285) in view of Floyd et al. (US 5,026,746). Floyd et al. disclose starch based binder composition for non-woven fibers or fabrics made of fiberglass (col 2, ln 12-14). The starch used in the composition can be a maltodextrin (col 3, ln 5) and the monomers include acrylic acid (col 4, ln 21). The ratio of monomer to starch may be varied from about 1:50 to about 15:1, preferably from about 1:1 and to about 7:1 (col 4, ln 24-26). Preferred dextrans include white dextrans, canary dextrans, and British gums (col 3, ln 49-50). A cross-linking agent (col 6, ln 27) and a catalyst (col 5, ln 13-15) is also present in the composition. The catalyst amount ranges from about 0.1-10% by weight of the monomer.

It would have been obvious to have used Floyd's disclosure of the Applicant's preferred dextrans (i.e. white dextrans, canary dextrans, and British gums) as the dextrans in Rodrigues et al., motivated by the desire to create a binder composition with improved recovery.

Rejection is maintained.

Response to Arguments

6. Applicant's arguments filed August 24, 2006 have been fully considered but they are not persuasive for the reasons set forth. Applicant argues that Rodrigues does not teach a binder composition that includes (1) a pre-binder that has a polycarboxy polymer and a crosslinking agent and (2) a co-binder that may be dextrin in which the co-binder is present in the binder composition

in an amount of at least about 50% and where the binder composition has a pre-binder:co-binder ratio from 90:10 to 25:75 as required by claim 1. These arguments are not persuasive because Rodrigues et al. specifically disclose a binder comprising a carboxylic monomer (i.e. Applicant's polycarboxy polymer), a crosslinking agent, and maltodextrins. Furthermore, Rodrigues et al. disclose that the hydrogen bonding complex (i.e. maltodextrins) to polymer binder weight ratio is from about 1:99 to about 99:1, which meets Applicant's range requirement of a pre-binder (Rodrigues' carboxylic monomer/crosslinking agent) to co-binder (Rodrigues' maltodextrin) ratio of 99:1 to about 1:99. Therefore, the rejections are maintained.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

UCR *ucb*

Ula Ruddock
Ula C. Ruddock
Primary Examiner
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